

REPLY

Serial No. 09/808,558
Atty. Docket No. GP068-05.CN3

Amendments to the Claims

The current status of the claims is as follows:

Claims 1-479 (Canceled)

480. (Currently Amended) A kit comprising:

~~a probe molecule for use in determining the presence of a target nucleic acid sequence in a sample, the probe comprising complementary first and second base regions capable of hybridizing to each other under nucleic acid assay conditions to that~~ form a hybrid containing at least one ribonucleotide modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety, wherein the probe forms a stable, double-stranded complex with the target nucleic acid sequence but not with a non-targeted nucleic acid under nucleic acid assay conditions, such that the target nucleic acid sequence can be detected, wherein the complex comprises a single-stranded form of the probe; and wherein the probe is provided in a kit further comprising a

~~a nucleic acid polymerase;~~

~~nucleotide triphosphates; and~~

an amplification oligonucleotide which, in the presence of a nucleic acid analyte and under amplification conditions, is extended to form part of a nucleic acid extension product containing the target nucleic acid sequence or directs the synthesis of a nucleic acid transcription product containing the target nucleic acid sequence.

481. (Currently Amended) The ~~probe~~ kit of claim 480, wherein the first base region contains at least one ribonucleotide modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety, and wherein the first base region complexes with the target nucleic acid sequence under the nucleic acid assay conditions.

482. (Currently Amended) The ~~probe kit~~ of claim 480, wherein that portion of the first base region ~~capable of forming a hybrid with which hybridizes to~~ the second base region ~~under nucleic acid assay conditions~~ includes a cluster of at least about 4 ribonucleotides modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety.

483. (Currently Amended) The ~~probe kit~~ of claim 482, wherein the first base region complexes with the target nucleic acid sequence under the nucleic acid assay conditions.

484. (Currently Amended) The ~~probe kit~~ of claim 480, wherein that portion of the first base region ~~capable of forming a hybrid with which hybridizes to~~ the second base region ~~under nucleic acid assay conditions~~ includes at least one nucleotide which is not a ribonucleotide modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety.

485. (Currently Amended) The ~~probe kit~~ of claim 484, wherein the first base region complexes with the target nucleic acid sequence under the nucleic acid assay conditions.

486. (Currently Amended) The ~~probe kit~~ of claim 480, wherein each nucleotide of that portion of the first base region ~~capable of forming a hybrid with which hybridizes to~~ the second base region ~~under nucleic acid assay conditions~~ is a ribonucleotide modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety.

487. (Currently Amended) The ~~probe kit~~ of claim 486, wherein the first base region complexes with the target nucleic acid sequence under the nucleic acid assay conditions.

488. (Currently Amended) The ~~probe kit~~ of claim 480, wherein each nucleotide of the probe is a ribonucleotide modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety.

489. (Currently Amended) The probe kit of claim 480, wherein the hybrid formed between the first and second base regions form a hybrid that is more stable than a hybrid formed between unmodified forms of the first and second base regions.

490. (Currently Amended) The probe kit of claim 480, wherein the probe includes a conjugate molecule.

491. (Currently Amended) The probe kit of claim 482, wherein the probe includes a conjugate molecule joined to the probe at a site located within the cluster of the first base region.

492. (Currently Amended) The probe kit of claim 480, wherein the first and second base regions are contained within an oligonucleotide that is between 10 and 100 bases in length.

493. (Currently Amended) The probe kit of claim 480, wherein the probe comprises a detectable label.

494. (Currently Amended) The probe kit of claim 493, wherein the detectable label comprises a fluorescent molecule.

495. (Currently Amended) The probe kit of claim 480, wherein the target nucleic acid analyte comprises RNA.

496. (Currently Amended) The probe kit of claim 495, wherein the RNA is ribosomal RNA.

497. (Currently Amended) The probe kit of claim 495, wherein a target sequence contained within the target nucleic acid includes a double-stranded region.

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498. (Currently Amended) The probe kit of any one of claims 480 to 497, wherein the 2'-O-alkyl substitution to the ribofuranosyl moiety is a 2'-O-methyl substitution.